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EXAMINER

PHAM, HUNG Q

ART UNIT PAPER NUMBER

2168

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/829,461

Applicant(s)

STREEPY, LARRY V.

Examiner

HUNG Q. PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-50 and 61-78 is/are pending in the application.
- 4a) Of the above claim(s) 74-78 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-50 and 61-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/11/2005 has been entered.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 31-50 and 61-73 are drawn to a method and system for interfacing with a multi-level data structure by selecting a concept object, displaying the selected concept object, parent, child, lateral concept objects of the selected concept object and association between concept objects, classified in class 707, subclass 104.1.
- II. Claims 74-78 are drawn to a system for generating a relationship between concept objects via a user interface by mapping the concept objects to the display, associating a relationship between concept objects using a symbol, classified in class 707, subclass 102.

The inventions are distinct, each from the other because of the following reasons:

Inventions I-II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. For example, Group I is drawn to a method and system for interfacing with a multi-level data structure by selecting a concept object, displaying the selected concept object, parent, child, lateral concept objects of the selected concept object and association between concept objects, Group II is drawn to a system for generating a relationship between concept objects via a user interface by mapping the concept objects to the display and associating a relationship between concept objects using a symbol. See MPEP 806.05(d).

Applicant's election with traverse of Group I, Claims 31-50 and 61-73 in the telephonic interview with examiner on October 14, 2005 is acknowledged. Non-elected claims 74-78 are withdrawn from further consideration.

Response to Arguments

Applicant's arguments with respect to claims 31-50 and 61-73 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 31, 42 and 61 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As in claim 31, the steps of displaying a first symbol along each respective geometrical ray originating from the central region the first image and illustrating an association between each second image to the first image, displaying a second symbol along each respective geometrical ray originating from the central region the first image and illustrating an association between each third image and the first image, displaying a third symbol along each respective geometrical ray originating from the central region the first image and illustrating an association between each fourth image and the first image, and positioning all second, third and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all symbols present in the first area were not described in the specification.

As in claim 42, the steps of displaying a first symbol on the display along each respective geometrical ray originating from the central region the first image and illustrating an association between each second image to the first image, displaying a second symbol on the display along each respective geometrical ray originating from the central region the first image and illustrating an

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association between each third image and the first image, displaying a third symbol on the display along each respective geometrical ray originating from the central region the first image and illustrating an association between each fourth image and the first image, and positioning all second, third and fourth images in locations around the first image such that the first image comprises a geometrical center in the first window relative to all symbols on the display were not described in the specification.

As in claim 61, the steps of displaying a second graphical element along each respective geometrical ray originating from the central region of the first image and representing an association between each third image and the first image, displaying a third graphical element along each respective geometrical ray originating from the central region of the first image and representing an association between each fourth image and the first image, and positioning all second, third and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all graphical elements were not described in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 31, 42, 61 and 66 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As in claims 31, 42 and 61 *the central region of the first image* in the step of “displaying one or more fourth images” refers to at least two central regions, one in the step of “displaying one or more second images” and one in the step of “displaying one or more third images”. It is unclear what item is being referenced.

Claim 66 recites the limitation *the central region occupied by the first health language concept object, the central region of the first image*. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neshatfar et al. [USP 6,490,581 B1] in view of Weinberg et al. [USP 6,237,006 B1] and Cerveri et al. [Java Interface to Human Anatomy Knowledge].

Regarding claims 31 and 41, Neshatfar teaches a method and a computer program for interfacing with a multi-level data structure as in FIG. 3. The method and program comprising:

- *selecting a concept object stored in the multi-level data structure* (As illustrated at FIG. 4 and Col. 8, Lines 24-25, by clicking on the FATHER as *a concept object stored in the multi-level data structure*, the CPerson class and its inheritance CAnimal are exposed);
- As shown at FIG. 4, *[-] father → is a CPerson as a first image is displayed in a central region of the left hand side 401 as first area, the first image comprising the selected concept object father;*
- *[-] CFamily as one or more second images is displayed above the first image and along a solid line as one or more respective geometrical rays originating from [-] as a central region of the first image, the second image comprising CFamily as a parent concept object of father as the selected concept object;*
- the square box includes a minus sign as *a first symbol along the respective geometrical ray originating from the central region the first image is displayed* and an indent inward to signify the parent-child relationship for *illustrating an association between the second image to the first image;*
- *father as the selected concept object has CPerson as one or more child concept objects, displaying [-] CPerson as one or more third images below the first image, and along another solid line as one or more respective geometrical rays originating from a central region of the first image, [-] CPerson as the third image comprising CPerson as*

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one of the child concept objects of the selected concept object, and displaying the square box includes a minus sign as a second symbol along each respective geometrical ray originating from the central region of the first image, each third image comprising one of the child concept objects of the selected concept object and an indent inward to signify the parent-child relationship for illustrating an association between CPerson as each third image and father as the first image;

- *father as the selected concept object has mother as one or more lateral concept objects, displaying [+] mother → is a CPerson as one or more fourth images along a solid line as one or more respective geometrical rays originating from the central region of the first image, each fourth image comprising mother as a lateral concept object of father as the selected concept object, and displaying the square box includes a plus sign as a third symbol along each respective geometrical rays originating from the central region of the first image, the square box includes a plus sign without an indent inward for illustrating an association between each fourth image and the first image;*

- *displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected concept object, parent concept object, child concept object, and a lateral concept object (As shown in FIG. 5, an editable text list is displayed at the right hand side of the screen as a second area in response to objects selected in the first area, the editable text list comprising information relating to the selected concept object).*

The missing of Neshatfar is the step of *positioning all second, third and fourth images in locations around the first image such that the first image comprises a geometrical center relative to*

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all symbols present in the first area, and the concept object, e.g., FATHER, is *a health language concept object*.

Weinberg teaches a method for displaying objects. Weinberg further discloses the step of *positioning all second, third and fourth images in locations around the first image* as in FIG. 1, and by positioning the parent and child object around the selected object instead of Weinberg cascading style, *the first image comprises a geometrical center relative to all the square box includes a minus/plus sign as symbols present in the first area*.

Cerveri teaches a method of displaying objects, wherein the object is *a health language concept object* (Cerveri, FIG. 4).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to display the parents, children object around the selected object as taught by Weinberg, and using a health language to illustrate an object as taught by Cerveri in order to distinguish a selected object with the other objects, and specify anatomical concept.

Regarding claim 32, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 31, Neshatfar further discloses the steps of *selecting a new concept object from one of the selected health language concept object, one or more parent concept objects, one or more children concept objects, and one or more lateral concept objects; displaying a fifth image comprising the selected new concept object; displaying one or more sixth images, each sixth image comprising a parent concept object of the selected new concept object; displaying a fourth symbol illustrating an association between each sixth image and the fifth image; if the selected new concept object has one or more child concept*

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objects, displaying one or more seventh images, each seventh image comprising a child concept object of the selected new concept object, and displaying a fifth symbol illustrating an association between each seventh image and the fifth image (FIG. 4 and the displaying when selecting CPerson).

The missing in FIG. 4 is the claimed *if the selected new concept object has one or more lateral concept objects, displaying one or more eighth images, each eighth image comprising a lateral concept object of the selected new concept object, and displaying a sixth symbol illustrating an association between each eighth image and the fifth image*. However, if CPerson has a lateral concept object similar to *mother* and *father* as discussed in claim 31, obviously, the step of displaying an eight image and a sixth symbol will take place. It would have been obvious for one of ordinary skill in the art at the time the invention was made to include the step of displaying an eight image and a sixth symbol if CPerson has a lateral concept object in order to represent elements and relationships captured in a relational database.

Regarding claim 33, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 31, Neshatfar further discloses *the first, second, third and fourth images comprise text strings* (FIG. 4).

Regarding to claims 34, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 31, Cerveri further discloses *the first image is highlighted* (Cerveri, FIG. 5a).

Regarding claim 35, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 31, Neshatfar further discloses *the first, second, third and fourth images, and the first, second and third symbols are displayed within a first view area* (FIG. 4).

Regarding claim 36, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 35, Neshatfar further discloses the step of *displaying one or more attributes of the selected concept object* (FIG. 4).

Regarding claim 37, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 36, Neshatfar further discloses the step of *displaying one or more details of the selected concept object* (FIG. 5).

Regarding claim 38, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 37, Neshatfar further discloses the step of *displaying one or more terms associated with the selected concept object* (FIG. 6).

Regarding claim 39, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 38, Neshatfar further discloses the step of *displaying a work area for temporarily storing terms* (FIG. 6).

Regarding claim 40, Neshatfar, Weinberg, and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 35, Neshatfar further discloses the step of *selecting either a microglossary panel, a term facet panel, a relations facet panel or a term phrase editor panel; and displaying the selected panel in a second viewing area* (FIG. 5).

Claims 42-45, 50, 61, 62, 64 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neshatfar et al. [USP 6,490,581 B1] in view of Weinberg et al. [USP 6,237,006 B1], White et al. [USP 6,618,733 B1] and Cerveri et al. [Java Interface to Human Anatomy Knowledge].

Regarding claim 42, Neshatfar teaches a system for interfacing with a multi-level data structure as in FIG. 3. The system comprising a computer program for:

- *selecting a concept object stored in the multi-level data structure* (As illustrated at FIG. 4 and Col. 8, Lines 24-25, by clicking on the FATHER as *a concept object stored in the multi-level data structure*, the CPerson class and its inheritance CAnimal are exposed);

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- As shown at FIG. 4, [-] father → is a CPerson as a first image is displayed in a central region of the left hand side 401 as first window comprising father as an alphanumeric string representing the selected concept object on the display;
- displaying [-] CFamily as one or more second images on the display and along a solid line as one or more respective geometrical rays originating from [-] as a central region of the first image, second image comprising CFamily as an alphanumeric string representing a parent concept object of father as the selected concept object; displaying the square box includes a minus sign as a first symbol on the display and along a solid line as one or more respective geometrical rays originating from [-] as a central region of the first image, and an indent inward to signify the parent-child relationship for illustrating an association between each second image and the first image;
- father as the selected concept object has CPerson as one or more child concept objects, displaying [-] CPerson as one or more third images on the display and along a solid line as one or more respective geometrical rays originating from [-] as a central region of the first image, [-] CPerson as each third image comprising CPerson as an alphanumeric string representing a child concept object of the selected concept object, and displaying the square box includes a minus sign as a second symbol on the display and an indent inward to signify the parent-child relationship for illustrating an association between CPerson as each third image and father as the first image;
- father as the selected concept object has mother as one or more lateral concept objects, displaying [+] mother → is a CPerson as one or more fourth images on the display along a solid line as one or more respective geometrical rays originating from the

central region of the first image, each fourth image comprising mother as an alphanumeric string representing a lateral concept object of father as the selected concept object, and displaying the square box includes a plus sign as a third symbol on the display, the square box includes a plus sign without an indent inward for illustrating an association between mother as each fourth image and father as the first image;

- *displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected concept object, parent concept object, child concept object, and a lateral concept object (As shown in FIG. 5, an editable text list is displayed at the right hand side of the screen as a second area in response to objects selected in the first area, the editable text list comprising information relating to the selected concept object).*
- The graphical user interface as in FIG. 4 implied the technique as discussed above is implemented in a computer, a display communicably connected to the computer, and a memory communicably connected to the computer for storing the multi-level data structure.

The missing of Neshatfar is the step of *positioning all second, third and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all symbols present in the first area, receiving input for one of modifying, removing, and creating relationships between concept objects, and the concept object, e.g., FATHER, is a health language concept object.*

Weinberg teaches a method for displaying objects. Weinberg further discloses the step of *positioning all second, third and fourth images in locations around the first image as in*

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FIG. 1, and by positioning the parent and child object around the selected object instead of Weinberg cascading style, *the first image comprises a geometrical center relative to all the square box includes a minus/plus sign as symbols present in the first area.*

White teaches a system for displaying a view window information characterizing semantics of relations between objects. White further teaches the technique of *receiving input for one of modifying, removing, and creating relationships between concept objects* (White, FIG. 9, Col. 20, Line 66-Col. 21, Lines 31).

Cerveri teaches a method of displaying objects, wherein the object is *a health language concept object* (Cerveri, FIG. 4).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to display the parents, children object around the selected object as taught by Weinberg, modifying and creating relationships between object as taught by White, and using a health language to illustrate an object as taught by Cerveri in order to distinguish a selected object with the other objects, edit the relationship between objects, and specify anatomical concept.

Regarding claim 61, Neshatfar teaches a method for interfacing with a multi-level data structure as in FIG. 3. The system comprising a computer program for:

- *selecting a concept object stored in the multi-level data structure* (As illustrated at FIG. 4 and Col. 8, Lines 24-25, by clicking on the FATHER as *a concept object stored in the multi-level data structure*, the CPerson class and its inheritance CAnimal are exposed);

- As shown at FIG. 4, [-] father \rightarrow is a CPerson as a first image is displayed in the left hand side 401 as a first region, the first image comprising the selected concept object father;
- [-] CFamily as one or more second images is displayed, the second image comprising CFamily as a parent concept object of father as the selected concept object;
- the square box includes a minus sign as a first graphical element is displayed and an indent inward to signify the parent-child relationship for illustrating an association between the second image to the first image;
- father as the selected concept object has CPerson as one or more child concept objects, displaying [-] CPerson as one or more third images on the display and along a solid line as one or more respective geometrical rays originating from [-] as a central region of the first image, [-] CPerson as each third image comprising CPerson as a child concept object of the selected concept object, and displaying the square box includes a minus sign as a second graphical element symbol along each respective geometrical ray originating from the central region of the first image and an indent inward to signify the parent-child relationship for illustrating an association between CPerson as each third image and father as the first image;
- father as the selected concept object has mother as one or more lateral concept objects, displaying [+] mother \rightarrow is a CPerson as one or more fourth images along a solid line as one or more respective geometrical rays originating from the central region of the first image, each fourth image comprising mother as a lateral concept object of father as the selected concept object, and displaying the square box includes a plus sign as a

third graphical element along each respective geometrical rays originating from the central region of the first image, the square box includes a plus sign without an indent inward for illustrating an association between each fourth image and the first image;

- *displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected concept object, parent concept object, child concept object, and a lateral concept object (As shown in FIG. 5, an editable text list is displayed at the right hand side of the screen as a second area in response to objects selected in the first area, the editable text list comprising information relating to the selected concept object).*

The missing of Neshatfar is the step of *positioning all second, third and fourth images in locations around the first image such that the first image comprises a geometrical center relative to all symbols present in the first area, receiving input for one of modifying a relationship between two or more concept objects; removing a relationship between two or more concept objects; creating a relationship between two or more concept objects; and creating new concept objects* and the concept object, e.g., FATHER, is *a medial concept object*.

Weinberg teaches a method for displaying objects. Weinberg further discloses the step of *positioning all second, third and fourth images in locations around the first image* as in FIG. 1, and by positioning the parent and child object around the selected object instead of Weinberg cascading style, *the first image comprises a geometrical center relative to all the* square box includes a minus/plus sign as *symbols present in the first area*.

White teaches a system for displaying a view window information characterizing semantics of relations between objects. White further teaches the technique of *creating a*

relationship between two or more concept objects (White, FIG. 9, Col. 20, Line 66-Col. 21, Lines 31).

Cerveri teaches a method of displaying objects, wherein the object is *a health language concept object* (Cerveri, FIG. 4).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to display the parents, children object around the selected object as taught by Weinberg, modifying and creating relationships between object as taught by White, and using a health language to illustrate an object as taught by Cerveri in order to distinguish a selected object with the other objects, edit the relationship between objects, and specify anatomical concept.

Regarding claim 43, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to 31, Neshatfar further discloses the steps of *selecting a new concept object from one of the selected health language concept object, one or more parent concept objects, one or more children concept objects, and one or more lateral concept objects; displaying a fifth image comprising the selected new concept object; displaying one or more sixth images, each sixth image comprising a parent concept object of the selected new concept object; displaying a fourth symbol illustrating an association between each sixth image and the fifth image; if the selected new concept object has one or more child concept objects, displaying one or more seventh images, each seventh image comprising a child concept object of the selected new concept object, and displaying a fifth symbol illustrating an association between each seventh image and the fifth image* (Neshatfar, FIG. 4 and the displaying when selecting CPerson). The missing in FIG. 4 is the claimed *if the selected new concept object has one or*

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more lateral concept objects, displaying one or more eighth images, each eighth image comprising a lateral concept object of the selected new concept object, and displaying a sixth symbol illustrating an association between each eighth image and the fifth image. However, if CPerson has a lateral concept object similar to *mother* and *father* as discussed in claim 31, obviously, the step of displaying an eighth image and a sixth symbol will take place. It would have been obvious for one of ordinary skill in the art at the time the invention was made to include the step of displaying an eighth image and a sixth symbol if CPerson has a lateral concept object in order to represent elements and relationships captured in a relational database.

Regarding claim 44, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 42, Neshatfar further discloses *the first, second, third and fourth images comprise text strings* (Neshatfar, FIG. 4), and Cerveri further discloses *the first image is highlighted* (Cerveri, FIG. 5a).

Regarding claim 45, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 42, Neshatfar further discloses the step of *displaying the first, second, third and fourth images, and the first, second and third symbols within a first viewing area on the display* (Neshatfar, FIG. 4).

Regarding claim 50, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 35, Neshatfar further discloses the step of *selecting either a microglossary panel, a term facet panel, a relations facet panel or a term phrase editor panel; and displaying the selected panel in a second viewing area* (Neshatfar, FIG. 5).

Regarding claim 62, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 61, Cerveri further discloses *the selected medical concept comprises a medical term from systemized nonmedical reference terminology* (page 389).

Regarding claim 64, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 61, Cerveri further discloses the step of *displaying a medical code from a medical database associated with the selected medical concept* (FIG. 4).

Regarding claim 65, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 61, Cerveri does not explicitly teach the step of *displaying a medical procedure associated with the selected medical concept*. However, as well known in the art, the UMLS metathesaurus include terminologies designed for use in patient record system, large disease and procedure classification used for statistical reporting and billing (UMLS Knowledge

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Sources, Metathesaurus). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the Cerveri method and system by linking a medical procedure with a selected medical concept as in FIG. 4 for displaying in order to plan a medical procedure for a particular patient.

Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neshatfar et al. [USP 6,490,581 B1], Weinberg et al. [USP 6,237,006 B1], White et al. [USP 6,618,733 B1] and Cerveri et al. [Java Interface to Human Anatomy Knowledge] as applied to claim 45 above, and further in view of Dorne [USP 5,325,293].

Regarding claim 46, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 45, Neshatfar further discloses the step of *displaying one or more attributes of the selected concept object in a second viewing area on the display* (Neshatfar, FIG. 5), but fails to teach *the attributes comprise at least one of a medical code and a medical code*. Cerveri discloses the step of *displaying one or more attributes of the selected concept object in a second viewing area on the display wherein the attributes comprise at least one of a medical code* that relates to a medical concept (Cerveri, FIG. 4). Dorne teaches a method and system for correlating medical procedures into billing code, for example CPT codes as *billing code* (Dorne, Col. 3, Lines 19-29). Therefore, it would have been obvious for one of ordinary skill in the art at the

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time the invention was made to include a medical code and CPT code as an attribute of a concept object in order to plan a medical procedure for a particular patient.

Regarding claim 47, Neshatfar, Weinberg, White, Cerveri and Dorne, in combination, teach all of the claimed subject matter as discussed above with respect to claim 46, Cerveri further discloses the step of *displaying one or more attributes of the selected concept object in a third viewing area on the display wherein the attributes comprise at least one of a medical code* that relates to a medical concept (Cerveri, FIG. 4), but does not explicitly teach the attributes is a *billing code*. Dorne teaches a method and system for correlating medical procedures into billing code, for example CPT codes (Dorne, Col. 3, Lines 19-29). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include a CPT code as an attribute of a medical concept as taught by Dorn in order to plan a medical procedure for a particular patient.

Regarding claim 48, Neshatfar, Weinberg, White, Cerveri and Dorne, in combination, teach all of the claimed subject matter as discussed above with respect to claim 47, Cerveri further discloses the step of *displaying one or more terms associated with selected concept object in a fourth viewing area on the display* (Cerveri, FIG. 4).

Regarding claim 49, Neshatfar, Weinberg, White, Cerveri and Dorne, in combination, teach all of the claimed subject matter as discussed above with respect to

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claim 48, Cerveri further discloses the step of *displaying a work area for temporarily storing terms in a fifth viewing area on the display* (Cerveri, FIG. 4).

Claims 66-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neshatfar et al. [USP 6,490,581 B1] in view of White et al. [USP 6,618,733 B1] and Cerveri et al. [Java Interface to Human Anatomy Knowledge].

Regarding claim 66, Neshatfar teaches a method for interfacing with a multi-level data structure as in FIG. 3. The method comprising:

- *receiving a selection of a first concept* (As illustrated at FIG. 4 and Col. 8, Lines 24-25, by clicking on the FATHER as *a concept*, the CPerson class and its inheritance CAnimal are exposed);
- As shown at FIG. 4, *father as a first concept object is displayed in response to receiving the selection in a central region of the left hand side 401 as first area, the first concept object corresponding to the select first concept father*;
- *CFamily as one second concept object is displayed around father as a radical manner relative to father as the first concept object such that the second concept object CFamily is positioned outside and around the central region occupied by the first concept object father along one respective visible geometrical ray originating from the central region of [-] father → is a CPerson as the first image, the first concept object father comprising a geometrical center for all visible geometrical ray*;

- *displaying an editable text list in a second area in response to objects selected in the first area, the text list comprising information relating to at least one of a selected first concept object and second concept object* (As shown in FIG. 5, *an editable text list* is displayed at the right hand side of the screen as *a second area in response to objects selected in the first area*, the *editable text list comprising information relating to the selected concept object*).

The missing of Neshatfar is the step of *receiving input for one of modifying a relationship between two or more health language concept objects; creating a relationship between two or more health language concept objects; removing a relationship between two or more health language concept objects; and creating new health language concept objects*.

White teaches a system for displaying a view window information characterizing semantics of relations between objects. White further teaches the technique of *creating a relationship between two or more concept objects* (White, FIG. 9, Col. 20, Line 66-Col. 21, Lines 31).

Cerveri teaches a method of displaying objects, wherein the object is *a health language concept object* (Cerveri, FIG. 4).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to creating relationships between object as taught by White, and using a health language to illustrate an object as taught by Cerveri in order to edit the relationship between objects, and specify anatomical concept.

Regarding claim 67, Neshatfar, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 66, Cerveri further

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discloses the step of *displaying additional information corresponding to the concept objects in response to the selection of the concept objects* (Cerveri, FIG. 5a).

Regarding claim 68, Neshatfar, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 66, Cerveri further discloses *the first concept object is part of a first nomenclature and the one or more second concept objects are part of one or more second nomenclatures* (Cerveri, FIG. 5a).

Regarding claim 69, Neshatfar, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 66, White further discloses the step of *displaying windows adjacent to the area for receiving input of at least one of modifying, creating, and removing a relationship between two or more health language concept objects* (White, FIG. 9).

Regarding claim 70, Neshatfar, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 69, Cerveri further discloses the step of *displaying one or more of the new health language concept object in a radial manner relative to the first health language concept objects* (Cerveri, FIG. 5a).

Regarding claim 71, Cerveri and White, in combination, teach all of the claimed subject matter as discussed above with respect to claim 66, White further discloses the

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step of *displaying one or more panels comprising work space adjacent to the area and for manipulating the health language concept objects* (White, FIG. 9).

Regarding claim 72, Cerveri and White, in combination, teach all of the claimed subject matter as discussed above with respect to claim 66, White further discloses the step of *allowing each health language concept object to be dragged to another portion of the area for modifying the dragged health language concept object* (White, FIG. 9).

Regarding claim 73, Cerveri and White, in combination, teach all of the claimed subject matter as discussed above with respect to claim 66, Cerveri further discloses the step of *changing the selected second health language concept to the first concept object and re-displaying a new set of second health language concept objects in response to a selection of the one or more second health language concept objects* (Cerveri, FIG. 5a).

Claim 63 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neshatfar et al. [USP 6,490,581 B1], Weinberg et al. [USP 6,237,006 B1], White et al. [USP 6,618,733 B1], Cerveri et al. [Java Interface to Human Anatomy Knowledge] as applied to claim 61 above, and further in view of in view of Dorne [USP 5,325,293].

Regarding claim 63, Neshatfar, Weinberg, White and Cerveri, in combination, teach all of the claimed subject matter as discussed above with respect to claim 61, but

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does not teach the step of *displaying a billing code from a medical database associated with the selected medical concept*. Dorne teaches a method and system for correlating medical procedures into billing code, for example CPT codes (Dorne, Col. 3, Lines 19-29).


Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include a CPT code as an attribute of a medical concept as taught by Dorn in order to plan a medical procedure for a particular patient.

Conclusion

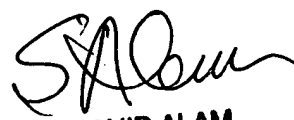
Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. PHAM whose telephone number is 571-272-4040. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JEFFREY A. GAFFIN can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


HUNG Q PHAM
Examiner
Art Unit 2168

October 14, 2005


SHAHID ALAM
PRIMARY EXAMINER